Information Services Board Presentation on the Project 25 (P25) Standard

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Presenter
James M. Broman, Co-chair, State Interoperability Executive Committee (SIEC)

Purpose of Appearance
The SIEC will review the Project 25 (P25) digital wireless radio communications standard, and recommend that the Board adopt P25 as the standard for radio equipment purchased by state agencies.

Issues
Because of its enhanced functionality and ability to address future interoperability needs, P25 upgradeable radio equipment costs 25–35% more than existing non-P25 compliant radios. Agencies that operate in closed environments where interoperability with external parties will never be required, or do not ever foresee the need to use the enhanced functionality P25 provides, have raised concerns about the need to pay a premium for unnecessary features.

Staff Recommendations to the Board
Staff recommends that the ISB approve the SIEC's recommendation to adopt P25 as a state standard, with the following provisions:

1. The directional approach for all purchases shall be towards increasing P25 compatibility.
2. Any new trunked systems should be P25.
3. Any new system or systems that require advanced digital features should be P25.
4. Any new system or equipment purchase should be, at a minimum upgradeable to P25.

Project Background
Project 25 is the name given to a joint development project that developed a suite of interoperable standards for digital land mobile radios (LMR). The standard was developed jointly by the federal government, the Association of Public Safety Communications Officials International (APCO), and the Telecommunications Industry Association (TIA). The P25 standard was adopted by this consortium in 1995. P25 is the only open standard for radio frequency interoperability, and grant guidance from Department of Homeland Security specifies the use of P25 radio systems unless a compelling business case can be made for an alternative.

In order to address the need for an increasing number of radio frequencies within the physically finite radio spectrum, Congress mandated that all federal agencies change from the conventional 25KHz channel spacing (known as wideband) to 12.5 kHz channel spacing (known as narrowband) by January 1, 2005. The Federal Communications Commission (FCC) has made narrowband a requirement for states as well. Narrowbanding more than doubles the number of available frequencies that can be used within the same frequency spectrum. Many Washington state agencies are already migrating to narrowband frequency use.

P25 is a digital standard that is backward compatible with existing analog technology, and uses cost-effective, high-level standardized encryption. In addition to federal agencies, a large number of states have already adopted P25 as their operational standard. In the Pacific Northwest, the Department of Defense is installing a P25 Ultra High Frequency (UHF) system in

the Bremerton-Puget Sound Area. A consortium consisting of the Departments of Homeland Security, Justice, and Treasury is putting in the first phase of a nationwide federal law enforcement P25 Very High Frequency (VHF) system that will run north and south along I-5 and east and west along I-90. The consortium is partnering with the Washington State Patrol and many local jurisdictions to enhance their infrastructures to support the partnerships. Recently, the Department of Homeland Security, through its Urban Area Security Initiative, funded P25 radio systems in King County, Snohomish County, Pierce County, and Clark County. Phase 2 of this project moves this P25 VHF trunked radio system through Portland, down I-5 to the California-Oregon state line, and east along Interstate 84 from Portland to the Idaho state line. P25 radios cost more than standard analog radios, though the difference in price has been decreasing steadily over the last several years. There is currently only one company delivering large scale P25 infrastructure; however, three more companies have announced plans to provide P25 infrastructure by the end of calendar year 2005. Similar to the trend that has been observed with P25 radio prices, growing market demand is expected to draw additional vendors to the P25 infrastructure marketplace, leading to increased competition and lower pricing.

Previous Appearances Before the Board
None.